Fort Huachuca Energy Projects

Energy Efficiency in Government Buildings Workshop

5 February 2005

Orlando, Florida

FT. HUACHUCA

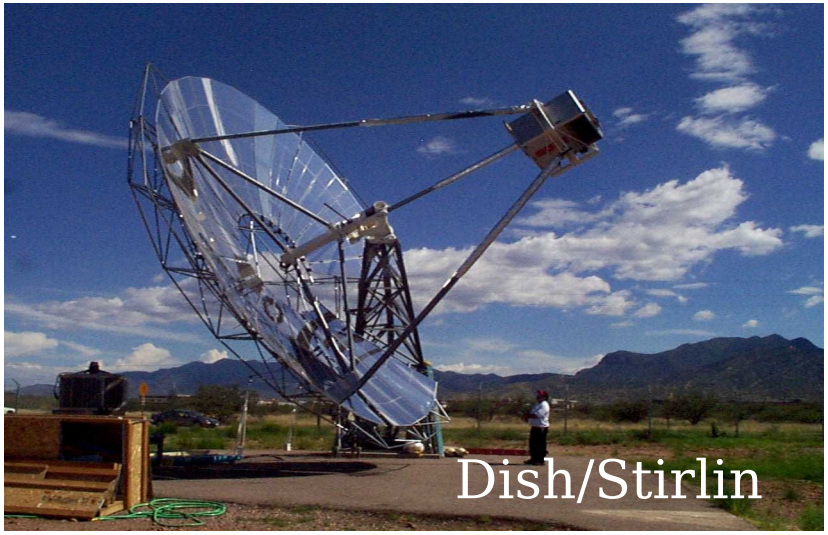
Ft. Huachuca, US Army

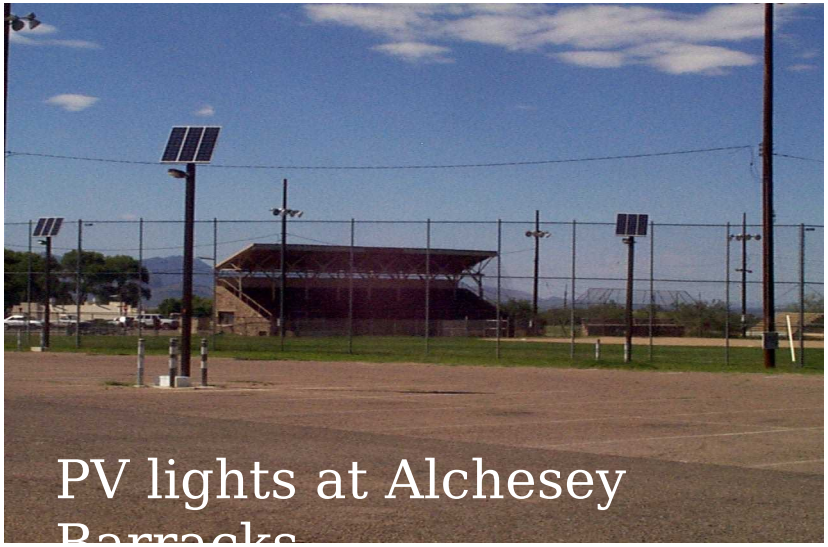
**Sandia National Labs,
USDOE**

BACKGROUND

- Ft. Huachuca is one of the oldest US DOD facilities
  - 128 years old
  - Located near US/Mexico border in Southeast Arizona
- Primary mission is U.S. Army Intelligence Training
- Excellent renewable energy resources--solar, wind, and geothermal
- Ft. commanders serious about reducing fossil energy use
  - 30 Energy projects in the last 11 Years
  - Electrical demand reduced 15% since 1994
  - 16 Awards received from the Presidential, Federal and Army level since 1992 for energy conservation, water conservation and renewables
  - Innovation is encouraged

RENEWABLE PROJECTS AT FT. HUACHUCA





Ft. Huachuca, US Army

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ESPC ACTIVITIES AT FT. HUACHUCA
Conventional Projects

- ESPC development activities began in 1995
- Task order contract awarded to HEC in 1996; processed through Huntsville Army Corps of Engineers
- 3 Task Orders issued, most have been focused on energy conservation with a mix of renewables
- Over $4 Million in Projects have been completed resulting in $600 Thousand in Annual Energy savings
- Traditional projects include: lighting retrofits and chiller replacements
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A COMPLETED CONVENTIONAL ESPC PROJECT AT FT. HUACHUCA

Lighting project at Kitchen at La Hacienda Club

Ft. Huachuca, US Army

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ESPC ACTIVITIES AT FT. HUACHUCA
Renewable Projects

- **Recently renewable projects have been encouraged; goal is for 5%-10% of ESPC to be renewable in each task order**
- **DOE Super ESPC contractors are not primarily used because they are too technology specific; One solar hot water project for the post hospital was planned, but never built due to personnel shortages at the local hospital**
- **Two Task Orders issued that include daylighting**
- **Renewable projects usually are not economically attractive to stand by themselves; bundling with more cost effective projects is a possible solution.**
- **Energy production projects are a potential problem because ESPC focuses on energy conservation NOT energy production**

RECENTLY COMPLETED SOLARWALLS AND DAYLIGHTING AT FORT HUACHUCA

Barnes Field House

Energy Management in Iraq

- Insulation of buildings, A/C units and ductwork, and water tanks to reduce the need for as frequent fuel convoys for the generators. Used TC Ceramic, www.capstonemfg.com
- Installation of radiant vestibule liners from Natick on hospital tents in Mosul and Tikrit

Water tanks on the hospital